REMARKS

The Office Action mailed February 4, 2005 has been reviewed and carefully considered.

Claim 7 has been cancelled without prejudice. Claims 1, 2, 8, 11, 12, 24, 25, and 28 have been amended. Claims 1-6 and 8-29 are pending.

Initially, the Examiner's indication of allowable subject matter is acknowledged. In particular, Claim 28 has been objected to and would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims.

Further, the Examiner's indication that the reference "EPO SEARCH REPORT" has been considered is acknowledged.

Claims 2, 7, 8, 11-14, and 24 stand rejected under 35 U.S.C. §112, second paragraph. Claim 2 has been amended to now recite, *inter alia*, "selecting transport packets". As noted above, Claim 7 has been cancelled. Claims 8, 11, and 12 have been amended to now recite, *inter alia*, "wherein said extracting step comprises". Claim 24 has been amended to now recite, *inter alia*, "filtering each of the respective derotated signals to remove channel energy outside of a respective defined channel". Claims 13 and 14 depend from Claims 11 and 13, respectively, which have been amended as recited immediately herein before. Accordingly, it is believed that all of Claims 2, 8, 11-14, and 24 now satisfy 35 U.S.C. §112, second paragraph. Accordingly, reconsideration of the rejection is respectfully requested.

Claims 1-23, 25-27, and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,240,140 to Lindbergh et al. (hereinafter "Lindbergh") in view of U.S. Patent No. 5,838,268 to Frenkel. Claim 24 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Frenkel in view of U.S. Patent No. 5,808,463 to Nagano.

It is respectfully asserted that none of the cited references teach or suggest, *inter alia*, "converting a plurality of carrier signals into a digital data stream ..., wherein said converting step comprises: band limiting a received signal to pass said plurality of carrier signals; and converting the band limited received signal to a digital signal", as now recited in amended Claim 1.

Further, it is respectfully asserted that none of the cited references

teach or suggest, *inter alia*, "band limiting a received signal to pass a plurality of carrier signals, each of said carrier signal having modulated thereon, and within a channel bandwidth, a respective data bearing stream; converting the band limited received signal to a digital signal", as recited in amended Claim 16.

Moreover, it is respectfully asserted that none of the cited references teach or suggest, inter alia, "band limiting a received signal to pass substantially those frequencies occupying a spectral region between a first frequency f_1 and a second frequency f_2; converting, using an analog-to-digital converter having a sampling rate f_s, the band-limited signal to produce a digital signal therefrom, said sampling rate f_s being greater than f_2", as recited in Claim 24.

Also, it is respectfully asserted that none of the cited references teach or suggest, inter alia, "a band limiter, for receiving an analog signal having a plurality of carrier signals and respective data modulated thereon, and for primarily passing only the plurality of carrier signals and the respective data modulated thereon; an analog to digital converter, for converting the plurality of carrier signals into a digital data stream", as recited in Claim 25.

The Examiner has admitted that "Lindbergh et al. does not disclose step/means of converting a plurality of carrier signals into said digital data stream" (Office Action, p. 4). Accordingly, the Examiner has relied upon Frenkel for disclosing the same.

However, it is respectfully asserted that Frenkel does not teach or suggest the above-recited limitations of Claims 1 and 16. For example, while the Examiner has cited Figures 1 and 2 and column 7, line 52 to column 9, line 22 of Frenkel for disclosing the above-recited limitations of Claims 1 and 16, disclosure could not be found in Frenkel relating to the conversion of an analog signal having a plurality of carrier signals into a digital bit stream, as essentially recited in Claims 1, 16, 24, and 25.

Moreover, the following limitations are also not disclosed in Frenkel and are not inherent: "converting, using an analog-to-digital converter having a sampling rate f_s, the band-limited signal to produce a digital signal therefrom, said sampling rate f_s being greater than f_2". For example, according to the Nyquist sampling theorem, when

sampling a signal, the sampling frequency must be twice the bandwidth of the input signal in order to reconstruct the original perfectly from the sampled version. However, the Examiner has incorrectly stated that the "said sampling rate fs must inherently be greater than f2 (according to Nyquist condition)" (Office Action, p. 8). However, f2 is simply the upper limit of the band and not the bandwidth. Thus, the Examiner's reasoning is flawed. For example, if f1 is 1KHz and f2 is 1.1KHz, then the bandwidth is 100 Hz, which would require a sampling frequency of 200Hz. Clearly, the sampling frequency of 200Hz is less than f2 (i.e., 1.1KHz). A definition for the Nyquist-Shannon sampling theorem from Wikipedia (http://en.wikipedia.org/wiki/Talk:Nyquist-Shannon_sampling_theorem) is enclosed herewith for the Examiner's convenience and review. The enclosed definition notes that a common misconception is that the sampling rate must be twice the highest frequency.

Moreover, it is respectfully asserted that none of the cited references teach or suggest, *inter alia*, "combining at least portions of data extracted from said at least two carrier signals to form a complete bitstream, said extracted data having associated with it stream identifier and sequence code information for, respectively, identifying the complete bitstream corresponding to the extracted data and determining the position of the extracted data within the complete bitstream", as recited in Claim 1.

Further, it is respectfully asserted that none of the cited references teach or suggest, *inter alia*, "combining data from at least two data bearing streams into a resultant data stream, said at least two data bearing streams comprising respective portions of said resultant data stream", as recited in Claim 16.

Also, it is respectfully asserted that none of the cited references teach or suggest, *inter alia*, "combining at least respective portions of at least two of the resulting decimated data bearing signals into a single data signal", as recited in Claim 24.

Additionally, it is respectfully asserted that none of the cited references teach or suggest, *inter alia*, "a processor, for combining at least portions of said data extracted from at least two carrier signals to produce a complete bitstream, said extracted data having associated with it stream identifier and

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sequence code information for determining, respectively, the complete bitstream corresponding to the data and the sequence within the complete bitstream of the data", as recited in Claim 25.

Of course, it is to be appreciated that while the preceding limitations have been segmented for clarity, the preceding limitations must read in view of all of the remaining limitations of the corresponding claim.

Regarding the above-recited limitations of Claims 1, 16, 24, and 25 corresponding to combining at least portions of data, the Examiner has relied upon Lindbergh for disclosing the same. However, while the present invention as claimed combines at least portions of data extracted from said at least two carrier signals to form a complete bitstream, wherein the carrier signals are included in a received signal that is band limited to pass the plurality of carrier signals, in contrast, Lindbergh discloses the receipt of multiple signals on multiple channels. That is, while the present invention as claimed band limits a received signal (one signal) having a plurality of carrier signals modulated thereon to pass the plurality of carrier signals, the invention of Lindbergh receives a plurality of signals on a plurality of channels 14, thereby increasing the number of component/steps required to process each channel (e.g., separate communication channels 14, separate initial receive queues 38, and separate intermediate receive queues 44, as shown in FIG. 3 of Lindbergh).

Further, with respect to the sequence code information recited in Claims 1 and 25, while data extracted from at least two carrier signals has associated therewith sequence code information for determining the sequence within the complete bitstream, Lindbergh discloses a sequence number that "is incremented each time a new header set is generated, thus providing all headers in a header set with a common identifying parameter" (Lindbergh, col. 7, lines 28-33). It is respectfully asserted that information for determining the sequence within a complete bitstream does not correspond to information for providing all headers in a header set with a common identifying parameter. For example, the difference is identifying the ordering of elements (sequence) within a group (complete bitstream) versus simply identifying the group itself.

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Thus, neither Lindbergh or Frenkel disclose the above-recited limitations of Claims 1, 16, 24, and 25. Moreover, Nagano is silent with respect to the above-recited limitations of Claims 1, 16, 24, and 25.

Accordingly, it is respectfully asserted that none of the cited references, either taken singly or in any combination, disclose all of the limitations recited in independent Claims 1, 16, 24, and 25. "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art" (MPEP §2143.03, citing In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). Accordingly, Claims 1, 16, 24, and 25 are patentably distinct and nonobvious over the cited references for at least the reasons set forth above.

"If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Claims 2-6 and 8-15 depend from Claim 1 or a claim which itself is dependent from Claim 1 and, thus, include all the limitations of Claim 1. Claims 17-23 depend from Claim 16 or a claim which itself is dependent from Claim 16 and, thus, include all the limitations of Claim 16. Claims 26-29 depend from Claim 25 and, thus, include all the limitations of Claim 25. Accordingly, Claims 2-6 and 8-15 are patentably distinct and non-obvious over the cited references for at least the reasons set forth above with respect to Claim 1, and Claims 17-23 and 26-29 are patentably distinct and nonobvious over the cited references for at least the reasons set forth above with respect to Claims 16 and 25, respectively.

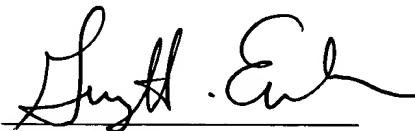Accordingly, reconsideration of the rejections is respectfully requested.

In view of the foregoing, Applicants respectfully request that the rejection of the claims set forth in the Office Action of February 4, 2005 be withdrawn, that pending claims 1-6 and 8-29 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

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No fee is believed due with this response. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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Enclosure

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